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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/808,623	03/24/2004	Man-ho Chiang	3409-167	6088

7590

10/04/2005

Donald L. Bartels  
COUDERT BROTHERS LLP  
Two Palo Alto Square  
3000 El Camino Real, Fourth Floor  
Palo Alto, CA 94306

EXAMINER

MAI, ANH T

ART UNIT PAPER NUMBER

2832

DATE MAILED: 10/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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OCT 26 2005

## Office Action Summary

Application No.

10/808,623

Applicant(s)

CHIANG ET AL.

Examiner

Anh T. Mai

Art Unit

2832

— The MAILING DATE of this communication appears on the cover sheet with the correspondence address —  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:  
  
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
2. Claims 11-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 11, there is no antecedent basis for "the electromagnetic component".

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-2, 4-5, 7-10, 14-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Dadafshar [US 6420953 B1]. Dadafshara discloses plurality of conductive traces having a curved shape and two terminal ends, each conductive trace formed on an insulating layer 520,525,535 of stacked PCB and positioned such that said conductive traces form a stack [c 7, ln21-32]; each said insulating layer defining an aperture 810 [figure 8], wherein each said conductive trace is shaped to substantially surround the perimeter of a respective one of said apertures [figure 7]; E-cores 510,520 positioned in the space defined by said apertures via middle portion [figs 6-7]; a copper foil 540, which has the same shape of the conductive trace with two terminal ends and a center aperture, positioned on top of the PBC stack of layers 525,530,535; a plurality of

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conductors 501,502,503,504,505 for interconnecting the terminal ends of each said conductive traces to form at least one turn of a first winding and one turn of a second winding [c 6, lns 1-7; fig 5]; an additional conductor 506 for connecting at least one of said conductive layer terminal ends to a terminal end of at least one of said conductive traces, such that two windings are formed by said conductive traces and said conductive layer [figures 5-8; col 5, line 47 to col 7, line 32].

With respect to claim 2, Dadafshar discloses the top conductive layer 540 is in conductive contact with top conductive trace [col 7, lines 21-32].

With respect to claims 7-10, at least one of said conductive traces is connected by said conductors to form a first turn of said first winding, and wherein at least one of said conductive traces is connected by said conductors to form a second turn of said first winding and at least one of said conductive traces is connected by said conductors to form a first turn of said second winding, and wherein at least one of said conductive traces is connected by said conductors to form a second turn of said second winding.

With respect to claim 14, the conductors comprise at least one plated through hole 830 on the insulating layer for the connecting pins [fig 8, col 6, lines 62-64].

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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6. Claims 6 and 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dadafshar.

Dadafshar discloses claimed invention [see rejection of claims 1-2] and embodiment of figure 10 wherein one or more copper plates 540A, 540B can be used to give the effect of having multiple turns, each turn a separate layer. However, Dadafshar does not position the copper plate on the bottom of said stack and having two terminal ends and approximately the same shape as said conductive traces. It would have been obvious to one having ordinary skill in the art at the time the invention was made to position an additional conductive layer on the bottom of the PCB, since it has been held that rearranging parts of an invention involves only routine skill in the art to provide turn for the winding on the bottom of the PCB. *In re Japikse*, 86 USPQ 70.

7. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dadafshar in view of Ferencz et al. [6914508].

Dadafshar discloses the claimed invention as cited above except for the soldered attachment of the top trace to the first conductive layer. Ferencz discloses the second PCB containing the primary windings is attached to the first PCB by attachment tabs that are soldered to receiving pads of the first PCB. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to solder attachment as taught by Ferencz to Dadafshar. The motivation would have been to provide connection between two electrically conductive parts. Therefore, it would have been obvious to combine Ferencz with Dadafshar.

8. Claims 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dadafshar in view of Kobayashi [5684445].

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Dadafshar discloses the claimed invention as cited above except for an insulating layer between the top conductive plate and first conductive layer. Kobayashi discloses an insulating layer 11 placing between the windings 4,6 of the transformer [figure 1] to insulate the windings from each other. At the time of the invention, it would have been obvious to a person of ordinary skill in the art place an insulation layer between the windings as taught by Kobayashi to Dadafshar. The motivation would have been to insulate two electrical windings. Therefore, it would have been obvious to combine Ferenzc with Kobayshi.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anh T. Mai whose telephone number is 571-272-1995. The examiner can normally be reached on 5/4/9 Schedule.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin Enad can be reached on 571-272-1990. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

am



**ANH MAI**  
**PRIMARY EXAMINER**

**Notice of References Cited**

Application/Control No.

10/808,623

Applicant(s)/Patent Under  
Reexamination  
CHIANG ET AL.

Examiner

Anh T. Mai

Art Unit

2832

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**U.S. PATENT DOCUMENTS**

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
	A	US-6,420,953	07-2002	Dadafshar, Majid	336/200
	B	US-6,914,508	07-2005	Ferencz et al.	336/200
	C	US-5,684,445	11-1997	Kobayashi et al.	336/232
	D	US-			
	E	US-			
	F	US-			
	G	US-			
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	I	US-			
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**FOREIGN PATENT DOCUMENTS**

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
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**NON-PATENT DOCUMENTS**

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
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\*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)  
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.